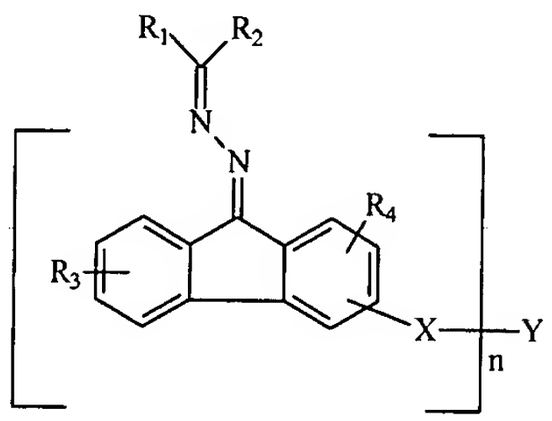
ORGANOPHOTORECEPTOR WITH CHARGE TRANSPORT MATERIAL WITH FLUORENONE AZINE GROUPS

Abstract of the Disclosure

Improved organophotoreceptor comprises an electrically conductive substrate and a photoconductive element on the electrically conductive substrate, the photoconductive element comprising:

(a) a charge transport material having the formula



where n is an integer between 2 and 6, inclusive;

R_1 and R_2 are, independently, H, an alkyl group, an alkaryl group, a heterocyclic group, or an aryl group;

R_3 and R_4 are, independently, H, halogen, carboxyl, hydroxyl, thiol, cyano, nitro, aldehyde group, ketone group, an ether group, an ester group, a carbonyl group, an alkyl group, an alkaryl group, or an aryl group;

X is a linking group having the formula $-(CH_2)_m-$, branched or linear, where m is an integer between 0 and 20, inclusive, and one or more of the methylene groups can be optionally replaced by O, S, C=O, O=S=O, a heterocyclic group, an aromatic group, urethane, urea, an ester group, a NR_5 group, a CHR_6 group, or a CR_7R_8 group where R_5, R_6, R_7, and R_8 are, independently, H, an alkyl group, an alkaryl group, a heterocyclic group, or an aryl group; and

Y is a bond, C, N, O, S, a branched or linear $-(CH_2)_p-$ group where p is an integer between 0 and 10 and where one or more of the hydrogen atoms in the $-(CH_2)_p-$ may be optionally removed to provide bond positions to enable n to have a higher value than 2, an aromatic group, a cycloalkyl group, a heterocyclic group, or a NR_9 group where R_9 is hydrogen atom, an alkyl group, or aryl group

Y comprises a bond, C, N, O, S, a branched or linear $-(CH_2)_p-$ group where p is an integer between 0 and 10, an aromatic group, a cycloalkyl group, a heterocyclic group, or

a NR_9 group where R_9 is hydrogen atom, an alkyl group, or aryl group, wherein Y has a structure selected to form n bonds with the corresponding X groups; and

(b) a charge generating compound.

Corresponding electrophotographic apparatuses and imaging methods are described.